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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,531	11/30/2005	Josephus Jan Emeis	VER-191XX	4249
207 7590 06/06/2008 WEINGARTEN, SCHÜRGIN, GAGNEBIN & LEBOVICI LLP TEN POST OFFICE SQUARE BOSTON, MA 02109				
EXAMINER				
OGUNBIYL, OLUWATOSIN A				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/538,531

**Applicant(s)**

EMEIS ET AL.

**Examiner**

OLUWATOSIN OGUNBIYI

**Art Unit**

1645

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6,9,10,12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) 5,10,12 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**RESPONSE TO AMENDMENT**

The amendment filed 3/12/08 has been entered into the record. Claims 2,7-8,11 and 14-16 have been cancelled. Claims 1,3-6,9-10 and 12-13 are pending. Claims 1,3,4,6 and 9 are under examination.

The text of Title 35 of the U.S. Code not reiterated herein can be found in the previous office action.

***Drawings***

The objection to the drawings is withdrawn.

***Rejections Withdrawn***

The rejection of claims 1-2,4, 6-9 and 14 under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter is withdrawn in view of the amendment to the claims.

The rejection of claims 1-4, 6-9 and 14 under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al, JP 08-205819 8/13/1996 is withdrawn in view of the amendment to the claims.

The rejection of claims 1-4, 6-9 and 14 under 35 U.S.C. 102(b) as being anticipated by Wang et al, CN 1274584 11/29/2000 is withdrawn in view of the amendment to the claims.

The rejection of claims 1-4, 6-9 and 14 under 35 U.S.C. 102(b) as being anticipated by Wang et al, CN 11172653 02/11/1998 is withdrawn in view of the amendment to the claims.

The rejection of Claim 3 under 35 U.S.C. 103(a) as being unpatentable over ATCC® Bacteria and Bacteriophages catalog, 1996 p. 108 in view of Imhoff et al. International Journal of Systematic Bacteriology (1998) 48:793-798 and Wang et al, CN 11172653 02/11/1998 is withdrawn in view of the amendment to the claims.

The rejection of claims 6, 7, 9 and 14 under 35 U.S.C. 103(a) as being unpatentable over ATCC® Bacteria and Bacteriophages catalog, 1996 p. 108 in view of Imhoff et al. International Journal of Systematic Bacteriology (1998) and Wang et al, CN 1274584 11/29/2000 is withdrawn in view of the amendment to the claims.

The rejection of claims 1-4, 6-9 and 14 under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al, JP 08-205819 8/13/1996 (translation provided) in view of Imhoff et al. International Journal of Systematic Bacteriology (1998) 48:793-798 and ATCC® Bacteria and

Bacteriophages catalog, 1996 p. 108 and Wang et al, CN 11172653 02/11/1998 is withdrawn in view of the amendment to the claims.

The rejection of claims 1-4, 6-9 and 14 under 35 U.S.C. 103(a) as being unpatentable over Wang et al, CN 1274584 11/29/2000 (translation attached) in view of Imhoff et al. International Journal of Systematic Bacteriology (1998) 48:793-798 and ATCC® Bacteria and Bacteriophages catalog, 1996 p. 108 and Wang et al, CN 11172653 02/11/1998 is withdrawn in view of the amendment to the claims.

The rejection of claims 1-4, 6-9 and 14 under 35 U.S.C. 103(a) as being unpatentable over Wang et al, CN 11172653 02/11/1998 (translation attached) in view of Imhoff et al. International Journal of Systematic Bacteriology (1998) and ATCC® Bacteria and Bacteriophages catalog, 1996 p. 108 48:793-798 is withdrawn in view of the amendment to the claims.

The rejection of claims 1,2,4 and 6-8 under 35 U.S.C. 102(b) as being anticipated by ATCC® Bacteria and Bacteriophages catalog, 1996 p. 108 as evidenced by Imhoff et al. International Journal of Systematic Bacteriology (1998) 48:793-798 is withdrawn in view of the amendment to the claims.

***New Rejections Based on Amendment***

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3 and 4 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Zurdo et al. Biochem. J. 1991, Vol. 274, pages 881-884.

The claims are drawn to a preparation comprising an isolated membrane fraction of *Rhodospirillum spp.* for use as a medicament.

Zurdo et al teach a preparation of isolated membranes of *Rhodospirillum rubrum* (p. 882 column 1 and 2 under materials and methods, see column 2 'intracytoplasmic membrane vesicles were isolated...'). Zurdo et al teach a pharmaceutical preparation comprising said membranes of *Rhodospirillum rubrum* and water (pharmaceutical excipient). See p. 882 column 2, first complete paragraph under last paragraph 'intracytoplasmic membrane vesicles were isolated...'. Zurdo et al teach the isolation of said membranes to study the carotenoid content of said membranes.

The recitations of uses of the instantly claimed *Rhodospirillum spp* as a medicament or plasma cholesterol lowering preparation are intended uses of the instantly claimed product and do not distinguish the structure of the claimed product from that of the prior art and is, not given patentable weight for the claimed product. This applies for the rejections below.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zurdo et al. Biochem. J. 1991, Vol. 274, pages 881-884 in view of ATCC® Bacteria and Bacteriophages catalog, 1996 p. 108 (cited previously) and Imhoff et al. International Journal of Systematic Bacteriology (1998) 48:793-798 (cited previously).

The claims are drawn to a preparation comprising an isolated membrane fraction of *Rhodospirillum spp* or *Phaeospirillum spp* for use as a medicament.

Zurdo et al teach a preparation of isolated membranes of *Rhodospirillum rubrum* (p. 882 column 1 and 2 under materials and methods, see column 2 'intracytoplasmic membrane vesicles were isolated...'). Zurdo et al teach a pharmaceutical preparation comprising said membranes of *Rhodospirillum rubrum* and water (pharmaceutical excipient). See p. 882 column 2, first complete paragraph under last paragraph 'intracytoplasmic membrane vesicles were isolated...'. Zurdo et al teach the isolation of said membranes to study the carotenoid content of said membranes.

Zurdo et al does not teach isolation of membranes from *Phaeospirillum spp.*

ATCC® catalog teaches other *Rhodospirillum spp* including *Rhodospirillum fulvum* and *Rhodospirillum molischianum* which have been taxonomically reclassified as *Phaeospirillum spp* as taught by Imhoff et al (see abstract).

It would have been prima facie obvious to one of ordinary skill in the art to obtain a preparation in the manner taught by Zurdo et al, comprising isolated membranes from other *Rhodospirillum spp* including *Rhodospirillum fulvum* and *Rhodospirillum molischianum* (reclassified as *Phaeospirillum spp*) taught by ATCC® catalog so as to study and compare the carotenoid content of said membranes of said species as similarly taught by Zurdo et al who teach the isolation of membranes from one *Rhodospirillum spp* in order to study the carotenoid content of said membranes.

Claims 1, 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zurdo et al. Biochem. J. 1991, Vol. 274, pages 881-884 and ATCC® Bacteria and Bacteriophages catalog, 1996 p. 108 (cited previously) and Imhoff et al. International Journal of Systematic



Bacteriology (1998, cited previously) 48:793-798 as applied to claims 1, 3 and 4 above further in view of Schmidt-Dannert et al. Current Opinion in Biotechnology, 2000, Vol. 11, pages 255-261 and Wang et al, CN 11172653 02/11/1998 (cited previous action).

The combination of Zurdo et al and ATCC® Bacteria and Bacteriophages catalog and Imhoff et al is set forth supra. Said combination does not teach a preparation comprising *Rhodospirillum spp* and *Phaeospirillum spp* or a food supplement or foodstuff comprising a preparation comprising *Rhodospirillum spp* and/or *Phaeospirillum spp*.

Schmidt-Dannert et al teach that carotenoids are used as food colorants in animal feeds and nutritional supplements (p. 255 under introduction).

Wang et teaches *Rhodospirillum spp* as a food additive or supplement to food (drink) wherein said *Rhodospirillum spp* inherently comprises a membrane fraction ((p. 2 claim 1). Wang et al also teach a *Rhodospirillum spp* preparation comprising more than one rhodospirillaceae genera (p. 2 claim 1).

It would have been prima facie obvious to one of ordinary skill in the art at the time the instant invention was made to make a food supplement or foodstuff comprising the preparation of isolated membranes of Zurdo et al and ATCC® Bacteria and Bacteriophages catalog and Imhoff et al as combined because Zurdo et al teach that membranes of *Rhodospirillum spp* comprise carotenoids and Schmidt-Dannert et al teach that carotenoids are used as food colorants in animal feeds and nutritional supplements and Wang et al teach that *Rhodospirillum spp* which inherently comprises a membrane fraction are used as a food additive or supplement to food. Since the beneficial carotenoids are present in the membranes of said *Rhodospirillum spp* it

would be prima facie obvious to use said membranes in the food supplement or food/feed instead of the whole bacterium.

Further, it would be prima facie obvious to one of ordinary skill in the art at the time the invention was made to include membrane fractions from several *Rhodospirillum* species (Rhodospirillaceae genera) such as *Rhodospirillum rubrum*, *Rhodospirillum fulvum* and *Rhodospirillum molischianum* (*R. fulvum* and *R. molischianum* are reclassified as *Phaeospirillum spp*) in said food supplement or food/feed because Wang et al teach a preparation comprising more than Rhodospirillaceae genera which are used as a food additive or supplement to food.

#### ***Status of Claims***

Claims 1,3,4,6 and 9 are rejected. No claims allowed.

#### ***Prior Art Made of Record Relevant to Applicants' Disclosure***

Pfenning et al. Archiv fur Mikrobiologie, 1965, Vol. 51, pages 258-266 – teach that *Rhodospirillum fulvum* and *Rhodospirillum molischianum* produce carotenoid e.g. lycopene and rhodopin (p. 258 third paragraph, and p. 263 table 3).

#### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oluwatosin Ogunbiyi whose telephone number is 571-272-9939. The examiner can generally be reached on M-F 8:30 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Shanon Foley can be reached on 571-272-0898.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Oluwatosin Ogunbiyi/

Examiner, Art Unit 1645

/Patricia A. Duffy/

Primary Examiner, Art Unit 1645